Developer Opportunities With Apple's Professional Applications

Session 002

Developer Opportunities With Apple's Professional Applications

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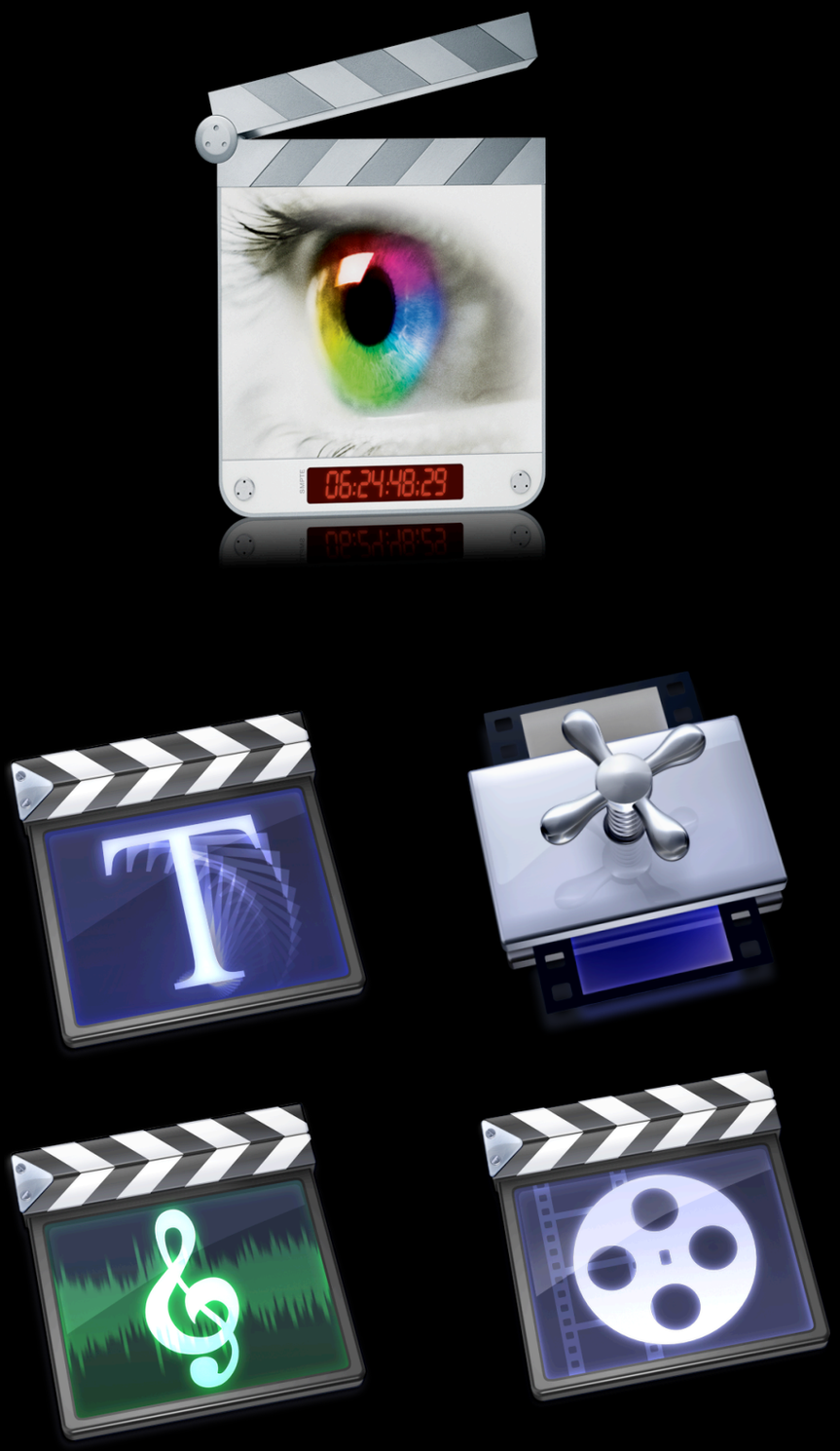
Applications

Apple’s Pro Applications

Developer Opportunities

- Plug-ins
  - Filters and effects for audio and video
- Hardware
  - Video and audio I/O devices
  - Real-time effects acceleration
- Content
  - Audio loop libraries
  - Animated fonts, textures, objects, and templates



Final Cut Pro 4.0

Professional Video Editing and Finishing Tool Suite

- Final Cut Pro
- Soundtrack
- LiveType
- Cinema Tools
- Compressor

Demo

Brian Meaney
Final Cut Pro Product Designer

http://developer.apple.com/wwdc2003/urls.html

Plug-in Opportunities

- Audio Units
  - Final Cut Pro, Soundtrack, Logic
- FXScript
  - Final Cut Express, Final Cut Pro
- AE Plug-ins
  - Final Cut Pro
- Shake Plug-ins

Content Opportunities

Soundtrack

- Apple Loops

LiveType

- Textures
- Objects
- LiveFonts

Hardware Opportunities

- PCI Cards
  - Standard and high-definition video acquisition
  - Multi-channel audio acquisition
  - Accelerated real-time effects
- Firewire
  - I/O Framework audio and video acquisition
- USB
  - Multi-channel audio acquisition

Roadmap

003 Creating Content for Soundtrack and LiveType	Pacific Heights Tues., 2:00pm
005 Interfacing Professional Video Hardware With Final Cut Pro 4.0	Pacific Heights Thurs., 3:30pm
006 Extending Professional Applications With Plug-ins	The Marina Fri., 3:30pm

Workflow

Real-world solutions involve many applications

- Movie production
  - Script writing, story boards
  - Film
    - Acquisition, editing, effects, color correction, finishing
  - Music and audio
    - Scoring, acquisition, mixing, effects, mastering
  - Distribution
    - Dailies, web, DVD authoring, etc.

Workflow Issues…

- Data interchange
  - Getting full access to the raw data and metadata
  - Format differences
    - Media
    - Project files
- Manipulating data along the way
  - It’s more than just reading files…

Apple Final Cut Pro 4 and Quantel eQ

Offline to Online Workflow featuring XML

Bill Hudson, Apple Computer
Tom McDonald, Quantel

http://developer.apple.com/wwdc2003/urls.html

XML Interchange Format

- Industry's first NLE to expose all Project File Data via XML
- Nothing hidden or proprietary
- Complete access to all Final Cut Pro 4 project attributes
- Provides a link to other editing systems, asset management databases, post-production pipelines
- First implementation: AAF (Advance Authoring Format) plug-in by Automatic Duck

Offline Acquisition

- Shoot Film, telecine in HD @ 24p
- Shoot HD 1080 (23.98, 24, 25, 29.97)
- Capture from HD source directly to Photo-JPEG, DV, DVCPRO50 with Pinnacle CinéWave 4 or Photo-JPEG with AJA Kona HD

HD VTR

HD SDI to
DV or Photo-JPEG

Final Cut Pro 4

Offline project
delivered on DVD-R

Real-time 2K
upres for film out

HD @ 720p, 1024p, 1080i
SD @ 29.97 3:2 in real-time

HD or SD VTR

PowerBook G4

Final Cut Pro
AAF Export

Output QuickTime
for offline
comparison

Quantel iQ

Final Cut Pro 4

24 fps off-line editing

- Edit with real-time effects
  - High quality
  - Low data rate (DV @ 24 = 2.9 MB/Sec)
  - Frame and time code accurate
- Monitor NTSC w/ real-time 3:2 insertion over FireWire
  - AJA Io box provide video and multi-channel audio output
- Export using Automatic Duck AAF plug-in
- Transfer over network to Quantel iQ or eQ

HD VTR

HD SDI to
DV or Photo-JPEG

Final Cut Pro 4

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AAF Export

Output QuickTime
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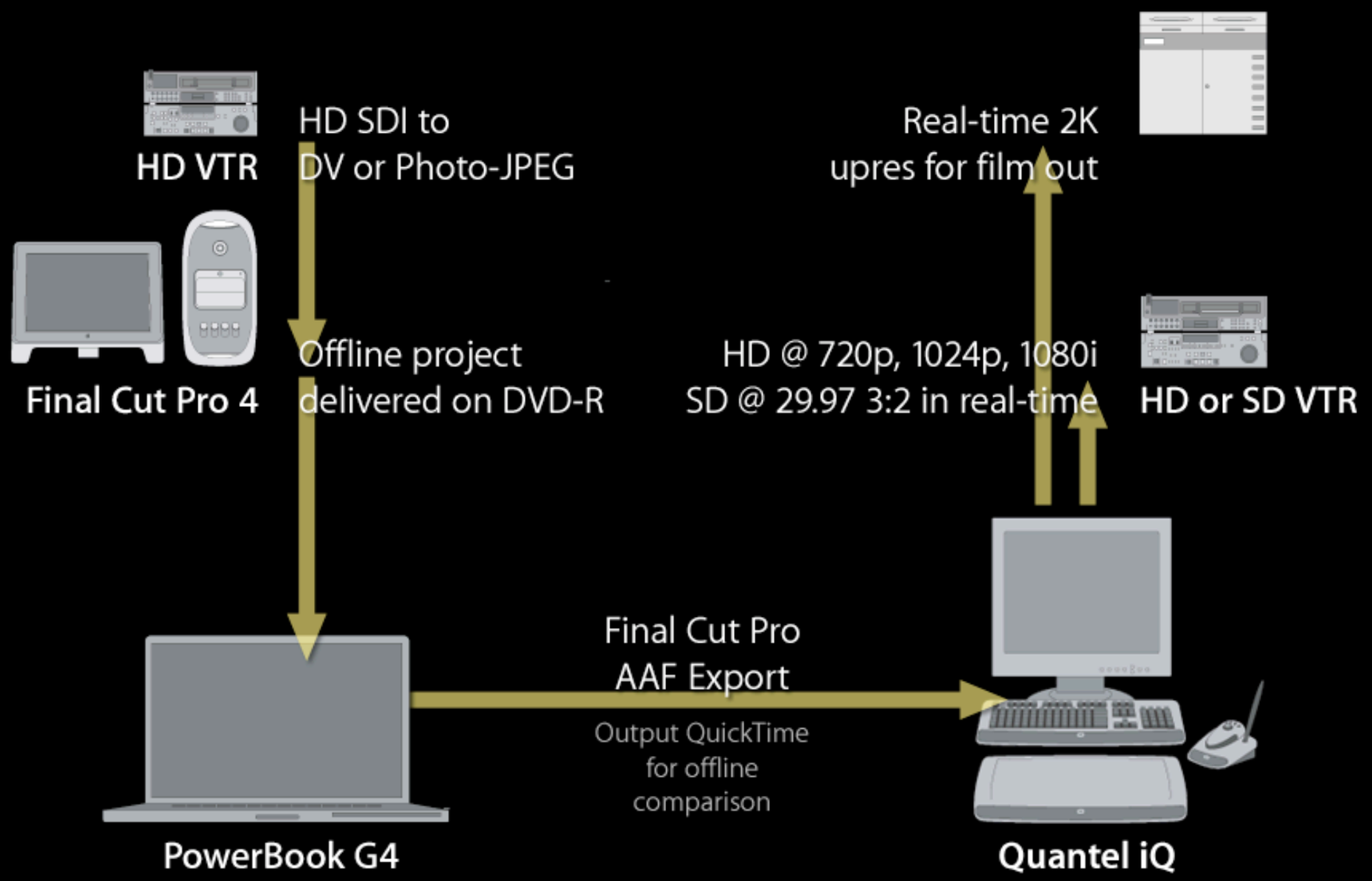
Quantel iQ

Quantel iQ for Digital Intermediate

- Auto conform from AAF with offline/online preview
  - Clip names, dissolves, speed changes, ff, wipes
- Beyond Virtual Telecine
  - Nonlinear access to entire film
  - Grade, opticals, FX
  - DaVinci, Pandora, QColor
- RT mix of 2K, HD, SD
- 10-bit log with 16-bit DR
- Screen in HD or 2K
- Record to film

Final Cut Pro 4 / Quantel iQ



Demo

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Workflow in Final Cut Pro 4.0

- Legacy formats
  - EDL, OMF
- XML
  - Full access to all project data (no “black” data)
  - Plug-in access of XML data
- AAF, Advanced Authoring Format
  - Built on top of XML by Automatic Duck™

Wrap Up

Roadmap

003 Creating Content for Soundtrack and LiveType	Pacific Heights Tues., 2:00pm
004 Data Interchange for Professional Media Applications	Pacific Heights Wed., 10:30am
005 Interfacing Professional Video Hardware With Final Cut Pro 4.0	Pacific Heights Thurs., 3:30pm
006 Extending Professional Applications With Plug-ins	The Marina Fri., 3:30pm

Who to Contact

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http://developer.apple.com/wwdc2003/urls.html

Q&A

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Worldwide Developers Conference